PCH2522
User's Manual

Beijing ART Technology Development Co., Ltd.

Contents

Contents 2

Chapter 1 Overview 3

Chapter 2 Components Layout Diagram and a Brief Description 4

2.1 The Main Component Layout Diagram 4

2.2 The Function Description for the Main Component 4

2.2.1 Signal Input and Output Connectors 4

2.2.2 Board Layer and Physical ID Selection 4

2.2.3 Status Lights 6

Chapter 3 Signal Connectors 7

Chapter 4 Connection Ways for Input and Output 8

4.1 Open-collector Connection 8

Chapter 5 Notes and Warranty Policy 9

5.1 Notes 9

5.2 Warranty Policy 9

Products Rapid Installation and Self-check 10

Rapid Installation 10

Self-check 10

Delete Wrong Installation 10

Chapter 1 Overview

Unpacking Checklist

Check the shipping carton for any damage. If the shipping carton and contents are damaged, notify the local dealer or sales for a replacement. Retain the shipping carton and packing material for inspection by the dealer.

Check for the following items in the package. If there are any missing items, contact your local dealer or sales.

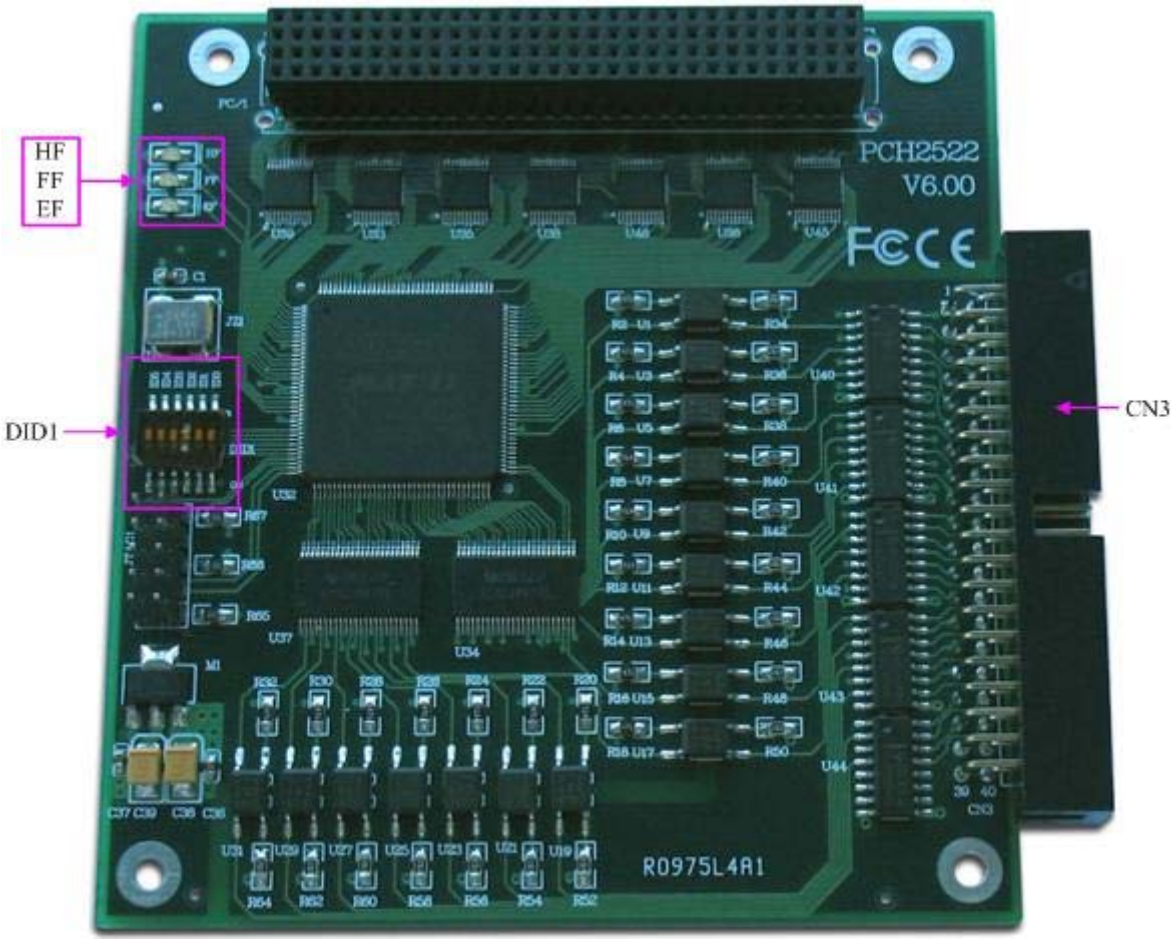
- PCH2522 Data Acquisition Board
- ART Disk
  a) user's manual (pdf)
  b) drive
  c) catalog
- Warranty Card

FEATURES

- 32-ch isolation digital output
- Output Type: open-collector
- Maximum Load: 30V, 100mA
- Isolation Voltage: 3750V
- Can drive power relay directly
- Dimension: 90mm (L) * 95.5mm (W)

Chapter 2 Components Layout Diagram and a Brief Description

2.1 The Main Component Layout Diagram



2.2 The Function Description for the Main Component

2.2.1 Signal Input and Output Connectors

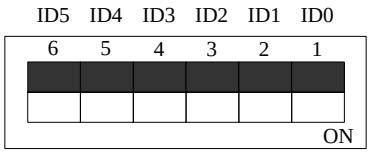
CN3: digital output port

2.2.2 Board Layer and Physical ID Selection

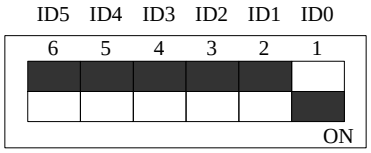
DID1: set the board ID and physical layers, switch No. 1, 2, 3, 4, 5, 6 correspond to ID0, ID1, ID2, ID3, ID4, ID5.

ID0, ID1, are board layer setting, when install multiple PC104+ boards, the board is inserted in the PC104+ interface is the bottom board, the layer number is 0, the boards up from the bottom to the up, the layer number is 1,2,3. The ID2 ~ ID5 is the physical ID setting, when install multiple PCH2522, we can use the DIP switches to set each one PCH2522 physical ID number, then the users can easily distinguish and access each card by the hardware configuration and software programming.

Switch ID2, ID3, ID4, ID5 are physical ID number setting, each bit is the binary, switches dial to "ON" that means the 1, the switch to the other side means 0. (When the board left the factory, the test software usually uses the logical ID to management device, so the physical ID is invalid. If you want to use multiple devices in a system, we had better to use physical ID.)



The figure indicates "000000", the layer number is 0, and the physical ID number is 0



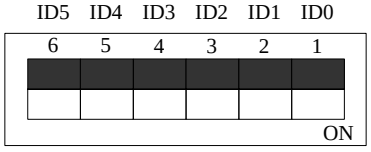
The figure indicates "000001", the layer number is 1, and the physical ID number is 0

The figure indicates "000010", the layer number is 2, and the physical ID number is 0

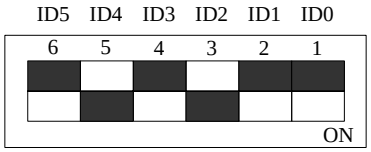
The figure indicates "000011", the layer number is 3, and the physical ID number is 0

The table is the layer number setting

ID1	ID0	Layer Number
OFF（0）	OFF（0）	0
OFF（0）	ON（1）	1
ON（1）	OFF（0）	2
ON（1）	ON（1）	3



The figure indicates "000000", the layer number is 0, and the physical ID number is 0



The figure indicates "010100", the layer number is 0, and the physical ID number is 5

The figure indicates "011100", the layer number is 0, and the physical ID number is 7

The figure indicates "111100", the layer number is 0, and the physical ID number is 15

Physical ID setting

ID5	ID4	ID3	ID2	Physical ID（Hex）	Physical ID（Dec）
OFF（0）	OFF（0）	OFF（0）	OFF（0）	0	0
OFF（0）	OFF（0）	OFF（0）	ON（1）	1	1
OFF（0）	OFF（0）	ON（1）	OFF（0）	2	2
OFF（0）	OFF（0）	ON（1）	ON（1）	3	3
OFF（0）	ON（1）	OFF（0）	OFF（0）	4	4
OFF（0）	ON（1）	OFF（0）	ON（1）	5	5
OFF（0）	ON（1）	ON（1）	OFF（0）	6	6
OFF（0）	ON（1）	ON（1）	ON（1）	7	7
ON（1）	OFF（0）	OFF（0）	OFF（0）	8	8
ON（1）	OFF（0）	OFF（0）	ON（1）	9	9
ON（1）	OFF（0）	ON（1）	OFF（0）	A	10
ON（1）	OFF（0）	ON（1）	ON（1）	B	11
ON（1）	ON（1）	OFF（0）	OFF（0）	C	12
ON（1）	ON（1）	OFF（0）	ON（1）	D	13
ON（1）	ON（1）	ON（1）	OFF（0）	E	14
ON（1）	ON（1）	ON（1）	ON（1）	F	15

2.2.3 Status Lights

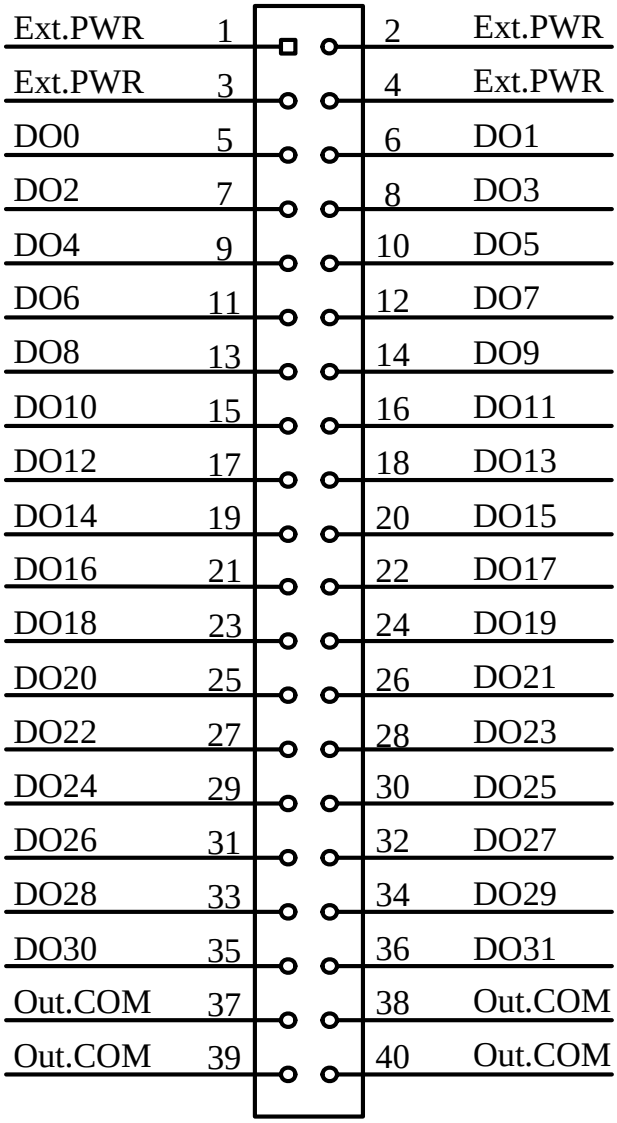
EF: FIFO non-empty indicator, ON is non-empty status.

HF: FIFO half-full indicator, ON is half-full status.

FF: FIFO overflow indicator, ON is overflow status.

Chapter 3 Signal Connectors

CN3: 40-pin definition

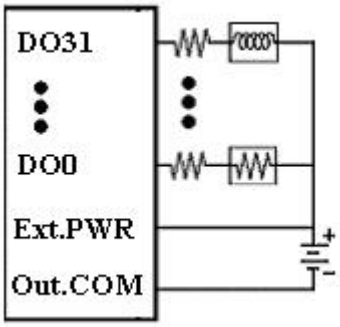


Pin definition

Signal Name	Type	Definition
DO0-DO31	Output	Digital output port
Ext.PWR	Output	External power positive port
Out.COM	Output	Digital ground, external power negative pot

Chapter 4 Connection Ways for Input and Output

4.1 Open-collector Connection



Chapter 5 Notes and Warranty Policy

5.1 Notes

In our products' packing, user can find a user manual, a PCH2522 module and a quality guarantee card. Users must keep quality guarantee card carefully, if the products have some problems and need repairing, please send products together with quality guarantee card to ART, we will provide good after-sale service and solve the problem as quickly as we can.

When using PCH2522, in order to prevent the IC (chip) from electrostatic harm, please do not touch IC (chip) in the front panel of PCH2522 module.

5.2 Warranty Policy

Thank you for choosing ART. To understand your rights and enjoy all the after-sales services we offer, please read the following carefully.

1. Before using ART's products please read the user manual and follow the instructions exactly. When sending in damaged products for repair, please attach an RMA application form which can be downloaded from: www.art-control.com.

2. All ART products come with a limited two-year warranty:

- The warranty period starts on the day the product is shipped from ART's factory
- For products containing storage devices (hard drives, flash cards, etc.), please back up your data before sending them for repair. ART is not responsible for any loss of data.
- Please ensure the use of properly licensed software with our systems. ART does not condone the use of pirated software and will not service systems using such software. ART will not be held legally responsible for products shipped with unlicensed software installed by the user.

3. Our repair service is not covered by ART's guarantee in the following situations:

- Damage caused by not following instructions in the User's Manual.
- Damage caused by carelessness on the user's part during product transportation.
- Damage caused by unsuitable storage environments (i.e. high temperatures, high humidity, or volatile chemicals).
- Damage from improper repair by unauthorized ART technicians.
- Products with altered and/or damaged serial numbers are not entitled to our service.

4. Customers are responsible for shipping costs to transport damaged products to our company or sales office.

5. To ensure the speed and quality of product repair, please download an RMA application form from our company website.

Products Rapid Installation and Self-check

Rapid Installation

Product-driven procedure is the operating system adaptive installation mode. After inserting the disc, you can select the appropriate board type on the pop-up interface, click the button【driver installation】; or select CD-ROM drive in Resource Explorer, locate the product catalog and enter into the APP folder, and implement Setup.exe file. After the installation, pop-up CD-ROM, shut off your computer, insert the PCI card. If it is a USB product, it can be directly inserted into the device. When the system prompts that it finds a new hardware, you do not specify a drive path, the operating system can automatically look up it from the system directory, and then you can complete the installation.

Self-check

At this moment, there should be installation information of the installed device in the Device Manager (when the device does not work, you can check this item.). Open "Start -> Programs -> ART Demonstration Monitoring and Control System -> Corresponding Board -> Advanced Testing Presentation System", the program is a standard testing procedure. Based on the specification of Pin definition, connect the signal acquisition data and test whether AD is normal or not. Connect the input pins to the corresponding output pins and use the testing procedure to test whether the switch is normal or not.

Delete Wrong Installation

When you select the wrong drive, or viruses lead to driver error, you can carry out the following operations: In Resource Explorer, open CD-ROM drive, run Others-> SUPPORT-> PCI.bat procedures, and delete the hardware information that relevant to our boards, and then carry out the process of section I all over again, we can complete the new installation.